05-GF-113
(2470)

January 8, 2003

Mr. Scot Cullen, Chief Electric Engineer
Public Service Commission
610 N. Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

RE: In the Matter of Filing Reporting Requirements for Appropriate Inspection and Maintenance, PSC Rule 113.0607(6)

Dear Mr. Cullen:

Enclosed for filing are 3 copies of Hartford Utility's report to the commission, submitted every two years, showing compliance with its Preventative Maintenance Plan.

Very truly yours,

Jeff Sueflohn

Jeff Sueflohn
Superintendent

Enclosures

TWO YEAR REPORT DOCUMENTING COMPLIANCE WITH THE PREVENTATIVE MAINTENANCE PLAN

City of Hartford Electric Utility

FILING DEADLINE
FEBRUARY 1, 2003

January 8, 2003

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This report format was prepared by the MEUW work group for PSC Rule 113.0607 for use by the 82 municipal electric utilities in Wisconsin and endorsed by PSC staff as meeting the requirements of Rule PSC 113.0607.

I Reporting Requirements: PSC 113.0607(6) states;

Each utility shall provide a periodic report to the commission showing compliance with its Preventative Maintenance Plan. The report shall include a list of inspected circuits and facilities, the condition of facilities according to established rating criteria, schedules established and success at meeting the established schedules.

II Inspection Schedule and Methods:

SCHEDULE:	MONTHLY	ANNUAL	EVERY 5 YEARS
Transmission (≥69Kv)		X	X
Substations	X	X	
Distribution (OH & UG)			X

METHODS: Five criteria groups will be used to complete the inspection of all facilities.

1. IR – infrared thermography used to find poor electrical connections and/or oil flow problems in equipment.
2. RFI - Radio Frequency Interference, a byproduct of loose hardware and connections, is checked using an AM radio receiver.
3. SI – structural integrity of all supporting hardware including poles, crossarms, insulators, structures, bases, foundations, buildings, etc.
4. Clearance – refers to proper spacing of conductors from other objects, trees and conductors.
5. EC – equipment condition on non-structural components such as circuit breakers, transformers, regulators, reclosers, relays, batteries, capacitors, etc.

Distribution facilities will be inspected by substation circuits on a 5 year cycle such that the entire system will be inspected every 5 years. Inspector instructions for inspecting all facilities and forms are included in the plan.

III Condition Rating Criteria

This criterion, as listed below, establishes the condition of a facility and also determines the repair schedule to correct deficiencies .

0) Good condition
1) Good condition but aging
2) Non-critical maintenance required – normally repair within 12 months
3) Priority maintenance required – normally repair within 90 days
4) Urgent maintenance required – report immediately to the utility and repair normally within 1 week

IV Corrective Action Schedule

The rating criteria as listed above determine the corrective action schedule.

V Record Keeping

All inspection forms and records will be retained for a minimum of 10 years. The inspection form contains all of the required critical information i.e. inspection dates, condition rating, schedule for repair and date of repair completion.

VI Reporting Requirements

A report and summary of this plan's progress will be submitted every two years with the first report due to the Commission by February 1, 2003. The report will consist of a cover letter documenting the percent of inspections achieved compared to the schedule and the percent of maintenance achieved within the scheduled time allowance.

VII Inspected Circuits and Facilities

138 Substation circuits 11, 13, 21 and 23 were inspected visually and by infrared. There were two bolted connectors on circuit breakers that were found on May 22, 2002 by infrared to be excessively hot. Both bolt connectors were fixed that same day.

Monroe Substation circuits 30, 31 and 32 were inspected. There was one transformer bushing on circuit 31 that needed repairs as soon as possible. It was repaired sixteen days after it was reported.

Wilson Substation circuits 21, 23 and 24 were inspected. There were three elbows found on circuit 21 during infrared testing that were hot. All three were repaired within nineteen days.

During inspections on circuits 40-45 at the Rural Substation, there were numerous poles and equipment that needed to be repaired. This implemented a five-year upgrade and rebuilding program. Approximately 25 percent of this have been completed in the past two years.

There have been no problems on circuit 50 and 51 located at the Airport Substation.

During 2001-2002, 100 percent of the distribution system has been inspected. All of the substation inspections have been completed on time. All items requiring repair were fixed within nineteen days of finding. We had one tornado that did extensive damage to circuit 30 located at the Monroe Substation. All poles and equipment were replaced.

On July 19, 2002 at 7:10 a.m., Transformer #1 located in the 138 Substation failed. This affected nearly 5,000 customers for several seconds. The new transformer was back online on October 15, 2002. Equipment failure accounted for four other outages, which affected 23 customers.

Except for circuits 40-45 located at the Rural Substation which we are currently working on replacing, the majority of the system is in excellent shape.

Base load and peaking generation, less than 50 megawatts per unit in size, is typically subject to pre-operational checks, in addition to checks and maintenance during and after periods of operation. Emergency generation is test run and maintained every month to confirm its operational readiness.

VIII Scheduling Goals Established and Success of Meeting the Criteria:

IX Facility condition – rating criteria:

During the past two years, 100% of the distribution system was inspected and all substation inspections were completed on time. Of the items found requiring maintenance, all were repaired before they were responsible for an outage to customers. Storm related outages have been minimal and equipment failure only accounted for 4 outages affecting 23 residential customers. The system is in excellent condition.